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PATENT APPLICATION  
Mo6438  
LeA 34,675

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION OF )  
THOMAS ECKEL ET AL ) GROUP NO.: 1714  
SERIAL NUMBER: 09/911,268 ) EXAMINER: TAE H. YOON  
FILED: July 23, 2001 ) RESPONSE TO PAPER NO.  
TITLE: FLAME-RESISTANT ) 20040604  
POLYCARBONATE COMPOSI- )  
SITIONS )

LETTER

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 2231-1450

Sir:

Enclosed is an Appeal Brief in the matter of the subject Appeal. Please charge the fee for filing the Brief, \$500.00, to our Deposit Account Number 13-3848. Triplicate copies of this paper are enclosed.

Respectfully submitted

By James R. Franks  
James R. Franks  
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Reg. No. 42,552

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JRF/dpc

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an enveloped addressed to: Commissioner for Patents, Alexandria, VA 22313-1450 1/31/05  
Date  
James R. Franks, Reg. No. 42,552  
Name of applicant, assignee, or Registered Representative  
James R. Franks  
Signature  
January 31, 2005  
Date



PATENT APPLICATION  
Mo-6438  
LeA 34,675

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICATION OF	)	
THOMAS ECKEL ET AL	)	GROUP NO.: 1714
SERIAL NUMBER: 09/911,268	)	
FILED: JULY 23, 2001	)	EXAMINER: TAE H. YOON
TITLE: FLAME-RESISTANT	)	
POLYCARBONATE	)	RESPONSE TO PAPER NO.
COMPOSITIONS	)	20040604
	)	
	)	

**APPEAL BRIEF**

Assistant Commissioner for Patents  
Washington, D.C. 20231  
Sir:

This Brief is an appeal from the Final Office Action of the Examiner dated June 8, 2004 in which the rejections of Claims 1-17 were maintained.

I hereby certify that this correspondence is being deposited  
with the United States Postal Service as first class mail in an  
enveloped addressed to: Commissioner for Patents,  
Alexandria, VA 22313-145 1/31/05

Date

James B. Franks - Reg. No. 42,552

Name of applicant, assignee or Registered Representative

  
Signature

January 31, 2005

Date

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### **I. REAL PARTY IN INTEREST**

The real party in interest is Bayer MaterialScience AG.

### **II. RELATED APPEALS AND INTERFERENCES**

There are no other related appeals or interferences known to Appellants, Appellants' legal representative, or Appellants' assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in this pending appeal.

### **III. STATUS OF THE CLAIMS**

Claims Pending: 1-17

Claims Canceled: None

Claims Allowed: None

Claims Withdrawn  
from Consideration: None

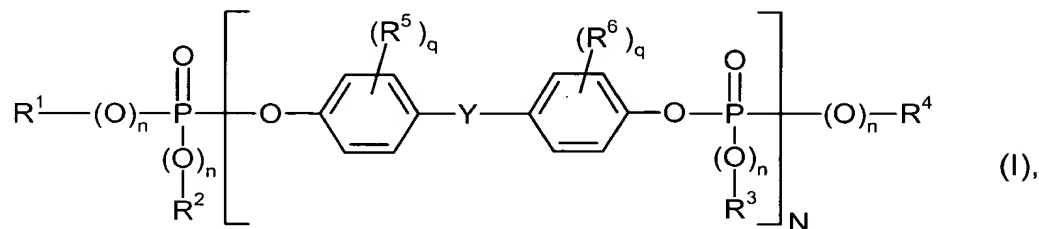
Claims Appealed: 1-17

### **IV. STATUS OF AMENDMENTS**

No amendment has been filed subsequent to the outstanding final rejection.

## V. SUMMARY OF THE INVENTION

The present invention is directed to a polycarbonate composition comprising a phosphorus compound represented by the general formula (I),



in which

$\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^3$  and  $\text{R}^4$  are each independently selected from the group consisting of (i)  $\text{C}_1$  to  $\text{C}_8$  alkyl optionally substituted by halogen, (ii)  $\text{C}_5$  to  $\text{C}_6$  cycloalkyl, (iii)  $\text{C}_6$  to  $\text{C}_{10}$  aryl and (iv)  $\text{C}_7$  to  $\text{C}_{12}$  aralkyl, each of (ii), (iii) and (iv) being optionally and independently substituted by at least one of halogen and  $\text{C}_1$  to  $\text{C}_4$  alkyl;

$n$  is 0 or 1;

$q$  is 0, 1, 2, 3 or 4;

$N$  is 0.1 to 5

$\text{R}^5$  and  $\text{R}^6$  are each independently selected from the group consisting of  $\text{C}_1$  to  $\text{C}_4$  alkyl and halogen; and

$\text{Y}$  denotes isopropylidene,

wherein the phosphorous compound represented by general formula (I) comprises less than 1 wt. % of isopropenylphenyl phosphate, based on the weight of said phosphorus compound represented by formula (I).

The present invention is also directed to a method of improving the flame resistance of a composition comprising a thermoplastic polymer selected from the group consisting of polycarbonate, polyester carbonate and combinations thereof,

said method comprising incorporating into said composition a phosphorus compound represented by general formula (I), as described above.

#### **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

(I) Claims 1-17 stand rejected under 35 U.S.C. § 102(e) as being anticipated by or, in the alternative under 35 U.S.C. § 103(a) as being obvious over United States Patent No. 6,569,930 B1 (**Eckel '930**).

(II) Claims 1-17 stand rejected under 35 U.S.C. § 102(e) as being anticipated by or, in the alternative under 35 U.S.C. § 103(a) as being obvious over United States Patent No. 6,441,068 B1 (**Eckel '068**).

(III) Claims 1-17 stand rejected under 35 U.S.C. § 103(a) as being obvious over Eckel '930 in view of United States Patent No. 3,919,353 (**Castelnuovo et al**).

(IV) Claims 1-17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative under 35 U.S.C. § 103(a) as being obvious over European Patent Application No. EP 0 771 851 A2 (**Gaggari et al**).

(V) Claims 1-5 and 10-14 stand rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative under 35 U.S.C. § 103(a) as being obvious over United States Patent No. 4,246,169 (**Norris et al**).

#### **VII. GROUPING OF CLAIMS**

Claims 1-17 are appealed together, and stand or fall together.

#### **VIII. ARGUMENTS**

(I) CLAIMS 1-17 ARE NOT RENDERED ANTICIPATED UNDER 35 U.S.C. § 102(e) BY OR, IN THE ALTERNATIVE OBVIOUS UNDER 35 U.S.C. § 103(a) OVER ECKEL '930.

The Examiner has taken the position that, under 35 U.S.C. § 102(e) or, in the alternative under 35 U.S.C. §103(a), Claims 1-17 are unpatentable over Eckel '930. Appellants respectfully disagree with regard to Claims 1-17.

Eckel '930 discloses flame resistant thermoplastic molding compositions that include a specifically structured phosphorous compound. See the abstract and column 2, line 26 through column 3, line 11 of Eckel '930.

The polycarbonate composition of Appellants' claims includes a phosphorous compound, represented by their formula (I), which contains less than 1 percent by weight of isopropenylphenyl phosphate (hereinafter referred to as "IPP") contaminant, based on the weight of the phosphorous compound represented by formula (I). See Appellants' Claim 1.

Appellants submit that prior to their present invention, phosphorous compounds according to their formula (I) contained more than 1 percent by weight of IPP contaminant. Attention is directed to a copy of Appellants' previously submitted declaration and the comparative data included herewith, which is included in the Evidence Appendix herewith for the convenience of the Board. The declaration of the Evidence Appendix was previously provided to the Office in an amendment dated March 8, 2004. The data of Appellants' declaration demonstrate that commercially available phosphorous compounds corresponding to Appellants' formula-(I), which are deemed to be representative of the state of the art prior to Appellants' invention, had IPP levels of greater than 1 percent by weight (e.g., 2.5 percent by weight, 9.9 percent by weight and 15.5 percent by weight).

With regard to the declaration included herewith and the preceding remarks, it is respectfully submitted that Eckel '930 does not disclose, teach or suggest polycarbonate compositions that include a phosphorous compound according to Appellants' formula-(I) which contain less than 1 percent by weight of IPP.

While it is true that "the discovery of an optimum value of a variable in a known process is normally obvious," that rule does not apply where the parameter being optimized was not recognized as one that would affect the results. *In re Antonie*, 559 F.2d 618, 620, 195 U.S.P.Q. 6 (CCPA 1977). "Even when obviousness is based on a single prior art reference, there must be a showing of a

suggestion or motivation to modify the teachings of that reference.” *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313 (Fed. Cir. 2000).

In light of the preceding remarks, Appellants' Claims 1-17 are deemed to be unanticipated by, and unobvious and patentable over Eckel '930.

(II) CLAIMS 1-17 ARE NOT RENDERED ANTICIPATED UNDER 35 U.S.C. § 102(e) BY OR, IN THE ALTERNATIVE OBVIOUS UNDER 35 U.S.C. § 103(a) OVER ECKEL '068.

The Examiner has taken the position that, under 35 U.S.C. § 102(e) or, in the alternative under 35 U.S.C. §103(a), Claims 1-17 are unpatentable over Eckel '068. Appellants respectfully disagree with regard to Claims 1-17.

Eckel '068 discloses a flame-resistant thermoplastic molding composition that includes a phosphorous compound (D). See the abstract and column 1, line 55 through column 2, line 41 of Eckel '068.

As discussed previously herein, the polycarbonate composition of Appellants' claims includes a phosphorous compound, represented by their formula (I), which contains less than 1 percent by weight of IPP contaminant, based on the weight of the phosphorous compound represented by formula (I). See Appellants' Claim 1.

Appellants submit that prior to their present invention, phosphorous compounds according to their formula (I) contained more than 1 percent by weight of IPP contaminant. Attention is directed to the copy of the declaration and the comparative data included herewith in the Evidence Appendix. The data of Appellants' declaration demonstrate that commercially available phosphorous compounds falling under Appellants' formula-(I), which are deemed to be representative of the state of the art prior to Appellants' invention, had IPP levels of greater than 1 percent by weight, e.g., 2.5 percent by weight, 9.9 percent by weight and 15.5 percent by weight.

With regard to the declaration included herewith and the preceding remarks, it is respectfully submitted that Eckel '068 does not disclose, teach or suggest polycarbonate compositions that include a phosphorous compound according to Appellants' formula-(I) which contain less than 1 percent by weight of IPP.

While it is true that “the discovery of an optimum value of a variable in a known process is normally obvious,” that rule does not apply where the parameter being optimized was not recognized as one that would affect the results. *In re Antonie*, 559 F.2d 618, 620, 195 U.S.P.Q. 6 (CCPA 1977). “Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference.” *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313 (Fed. Cir. 2000).

In light of the preceding remarks, Appellants' Claims 1-17 are deemed to be unanticipated by, and unobvious and patentable over Eckel '068.

(III) CLAIMS 1-17 ARE NOT RENDERED OBVIOUS UNDER 35 U.S.C. § 103(a) OVER ECKEL '930 IN VIEW OF CASTELNUOVO ET AL.

The Examiner has taken the position that , under 35 U.S.C. §103(a), Claims 1-17 are unpatentable over Eckel '930 in view of Castelnuovo et al. Appellants respectfully disagree with regard to Claims 1-17.

Eckel '930 has been discussed previously herein, and discloses flame resistant thermoplastic molding compositions that include, as necessary components: aromatic polycarbonate; graft polymer; a specifically structured phosphorous compound (represented by their formula-(I)); fluorinated polyolefin; and finely divided inorganic powder. See column 2, line 26 through column 3, line 11; and column 10, line 48 through column 11, line 9 of Eckel '930.

Castelnuovo et al discloses molding compositions that include, as necessary components: saturated linear polyesters prepared from (i) aliphatic or aromatic dicarboxylic acids and (ii) aliphatic or cycloaliphatic diols; and a polymer having a second order transition temperature of less than 0°C. See the abstract, and column 1, line 66 through column 2, line 14 of Castelnuovo et al.

Eckel '930 provides no disclosure, teaching or suggestion with regard to including polyesters in their molding compositions. Castelnuovo et al provide no disclosure, teaching or suggestion as to including aromatic polycarbonates, phosphorous compounds, fluorinated polyolefins or finely divided inorganic powders in their molding compositions. As such, neither Eckel '930 nor Castelnuovo et al



provide the requisite disclosure that would motivate a skilled artisan to combine or otherwise modify their respective disclosures.

As the Court of Appeals for the Federal Circuit has stated, there are three possible sources for motivation to combine references in a manner that would render claims obvious. These are: (1) the nature of the problem to be solved; (2) the teaching of the prior art; and (3) the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). The nature of the problem to be solved and the knowledge of persons of ordinary skill in the art are not present here and have not been relied upon in the rejection. As for the teaching of the prior art, the above discussion has established that neither of the patents relied upon in the rejection provide the requisite teaching, and certainly do not provide the motivation or suggestion to combine that is required by Court decisions.

As discussed previously herein, the polycarbonate composition of Appellants' claims includes a phosphorous compound, represented by their formula (I), which contains less than 1 percent by weight of IPP contaminant, based on the weight of the phosphorous compound represented by formula (I). See Appellants' Claim 1.

Appellants submit that prior to their present invention, phosphorous compounds according to their formula (I) contained more than 1 percent by weight of IPP contaminant. Attention is directed to the copy of the declaration and the comparative data included herewith in the Evidence Appendix. The data of Appellants' declaration demonstrate that commercially available phosphorous compounds corresponding to Appellants' formula-(I), which are deemed to be representative of the state of the art prior to Appellants' invention, had IPP levels of greater than 1 percent by weight, e.g., 2.5 percent by weight, 9.9 percent by weight and 15.5 percent by weight.

With regard to the declaration included herewith and the preceding remarks, it is respectfully submitted that Eckel '930 and Castelnuovo et al, either alone or in combination, do not disclose, teach or suggest polycarbonate compositions that include a phosphorous compound according to Appellants' formula-(I) which contain less than 1 percent by weight of IPP.

It is respectfully submitted that the rejection impermissibly uses Appellants' application as a blueprint for selecting and combining or modifying the cited references to arrive at Appellants' claimed invention, thereby making use of prohibited hindsight in the selection and application of that prior art. The use of hindsight reconstruction of an invention is an illogical and inappropriate process by which to determine patentability, *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Modifying "prior art references without evidence of such a suggestion, teaching or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability – the essence of hindsight." *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999).

In light of the preceding remarks, Appellants' Claims 1-17 are deemed to be unobvious and patentable over Eckel '930 in view of Castelnuovo et al.

(IV) CLAIMS 1-17 ARE NOT RENDERED ANTICIPATED UNDER 35 U.S.C. § 102(b) BY OR, IN THE ALTERNATIVE OBVIOUS UNDER 35 U.S.C. § 103(a) OVER GAGGAR ET AL.

The Examiner has taken the position that, under 35 U.S.C. § 102(b) or, in the alternative under 35 U.S.C. §103(a), Claims 1-17 are unpatentable over Gaggar et al. Appellants respectfully disagree with regard to Claims 1-17.

Gaggar et al disclose a flame retardant polycarbonate blend that includes aromatic polycarbonate resin and a phosphate (phosphoric ester). See the abstract and page 5, line 45 through page 6, line 54 of Gaggar et al.

As discussed previously herein, the polycarbonate composition of Appellants' claims includes a phosphorous compound, represented by their formula (I), which contains less than 1 percent by weight of IPP contaminant, based on the weight of the phosphorous compound represented by formula (I). See Appellants' Claim 1.

Appellants submit that prior to their present invention, phosphorous compounds according to their formula (I) contained more than 1 percent by weight of IPP contaminant. Attention is directed to the copy of the declaration and the comparative data included herewith in the Evidence Appendix. The data of Appellants' declaration demonstrate that commercially available phosphorous

compounds falling under Appellants' formula-(I), which are deemed to be representative of the state of the art prior to Appellants' invention, had IPP levels of greater than 1 percent by weight, e.g., 2.5 percent by weight, 9.9 percent by weight and 15.5 percent by weight.

With regard to the declaration included herewith and the preceding remarks, it is respectfully submitted that Gaggar et al does not disclose, teach or suggest polycarbonate compositions that include a phosphorous compound according to Appellants' formula-(I) which contain less than 1 percent by weight of IPP.

In light of the preceding remarks, Appellants' Claims 1-17 are deemed to be unanticipated by, and unobvious and patentable over Gaggar et al.

(V) CLAIMS 1-5 AND 10-14 ARE NOT RENDERED ANTICIPATED UNDER 35 U.S.C. § 102(b) BY OR, IN THE ALTERNATIVE OBVIOUS UNDER 35 U.S.C. §103(a) OVER NORRIS ET AL.

The Examiner has taken the position that, under 35 U.S.C. § 102(b) or, in the alternative under 35 U.S.C. §103(a), Claims 1-5 and 10-14 are unpatentable over Norris et al. Appellants respectfully disagree with regard to Claims 1-5 and 10-14.

Norris et al disclose plastics containing flame-retardant phosphorous materials (abstract).

As discussed previously herein, the polycarbonate composition of Appellants' claims includes a phosphorous compound, represented by their formula (I), which contains less than 1 percent by weight of IPP contaminant, based on the weight of the phosphorous compound represented by formula (I). See Appellants' Claim 1.

Appellants submit that prior to their present invention, phosphorous compounds according to their formula (I) contained more than 1 percent by weight of IPP contaminant. Attention is directed to the copy of the declaration and the comparative data included herewith in the Evidence Appendix. The data of Appellants' declaration demonstrate that commercially available phosphorous compounds falling under Appellants' formula-(I), which are deemed to be

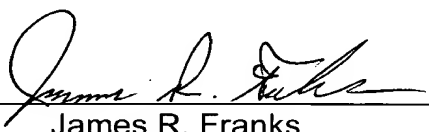
representative of the state of the art prior to Appellants' invention, had IPP levels of greater than 1 percent by weight, e.g., 2.5 percent by weight, 9.9 percent by weight and 15.5 percent by weight.

With regard to the declaration included herewith and the preceding remarks, it is respectfully submitted that Norris et al does not disclose, teach or suggest polycarbonate compositions that include a phosphorous compound according to Appellants' formula-(I) which contain less than 1 percent by weight of IPP.

In light of the preceding remarks, Appellants' Claims 1-17 are deemed to be unanticipated by, and unobvious and patentable over Norris et al.

In view of the remarks herein, Appellants' respectfully submit that their claimed polycarbonate composition is not disclosed, taught or fairly suggested by: (i) Eckel '930; (ii) Eckel '068; (iii) Eckel '930 in view of Castelnuovo et al; (iv) Gaggar et al; or (v) Norris et al. Thus, Appellants respectfully request that the Board of Appeals reverse the decision of the Examiner, and remand the application for allowance of Claims 1-17 and issuance of a patent.

Respectfully submitted,

By   
James R. Franks  
Agent for Appellants  
Reg. No. 42,552

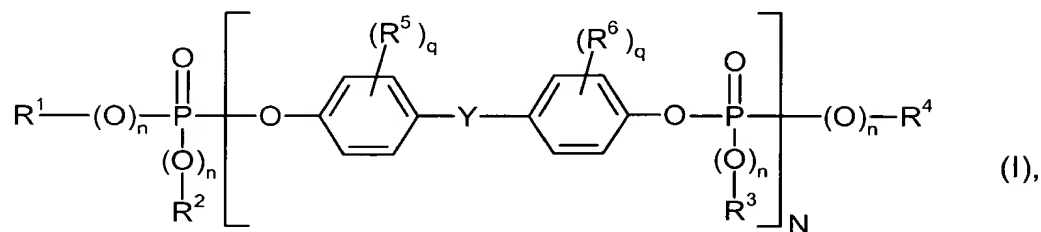
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jdg/franks/jrf050

## CLAIMS APPENDIX

### CLAIMS ON APPEAL

1. (Previously Presented) A polycarbonate composition comprising a phosphorus compound represented by the general formula (I),



in which

$\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^3$  and  $\text{R}^4$  are each independently selected from the group consisting of (i)  $\text{C}_1$  to  $\text{C}_8$  alkyl optionally substituted by halogen, (ii)  $\text{C}_5$  to  $\text{C}_6$  cycloalkyl, (iii)  $\text{C}_6$  to  $\text{C}_{10}$  aryl and (iv)  $\text{C}_7$  to  $\text{C}_{12}$  aralkyl, each of (ii), (iii) and (iv) being optionally and independently substituted by at least one of halogen and  $\text{C}_1$  to  $\text{C}_4$  alkyl;

$n$  is 0 or 1;

$q$  is 0, 1, 2, 3 or 4;

$N$  is 0.1 to 5

$\text{R}^5$  and  $\text{R}^6$  are each independently selected from the group consisting of  $\text{C}_1$  to  $\text{C}_4$  alkyl and halogen; and

$\text{Y}$  denotes isopropylidene,

wherein the phosphorous compound represented by general formula (I) comprises less than 1 wt. % of isopropenylphenyl phosphate, based on the weight of said phosphorus compound represented by formula (I).

2. (Original) The composition of Claim 1, wherein said phosphorous compound represented by general formula (I) comprises less than 0.5 wt. % of isopropylphenyl phosphate, based on the weight of said phosphorus compound represented by general formula (I).

3. (Original) The composition of Claim 1, wherein said phosphorous compound represented by general formula (I) comprises less than 0.2 wt. % of isopropylphenyl phosphate, based on the weight of said phosphorus compound represented by general formula (I).

4. (Original) The composition of Claim 1, comprising 0.5 to 20 wt. % of said phosphorus compound represented by general formula (I) or a mixture of phosphorus compounds represented by general formula (I), based on the total weight of said composition.

5. (Original) The composition of Claim 1, further comprising 0.5 to 60 wt. % of a graft polymer, based on the total weight of said composition.

6. (Previously Presented) The composition of Claim 1, wherein said composition comprises:

- A) 40 to 99 wt. % of at least one of aromatic polycarbonate and polyester carbonate;
- B) 0.5 to 60 wt. % of a graft polymer;
- C) 0 to 45 wt. % of at least one thermoplastic polymer selected from the group consisting of vinyl (co)polymers and polyalkylene terephthalates;

- D) 0.5 to 20 wt. % of said phosphorus compound represented by general formula (I); and
- E) 0 to 5 wt. % of a fluorinated polyolefin,

wherein the weight percents of A), B), C), D) and E) are each based on the total weight of said composition.

7. (Original) The composition of Claim 6 wherein said graft polymer B) is prepared from:

B.1 5 to 95 wt. % of at least one vinyl monomer; and

B.2 95 to 5 wt. % of at least one graft base having a glass transition temperature of less than 10°C,

the weight percents of B.1 and B.2 being based on the total weight of B.1 and B.2.

8. (Previously Presented) The composition of Claim 7, wherein said vinyl monomer B.1 comprises a mixture of,

B.1.1 a first vinyl monomer selected from the group consisting of styrene,  $\alpha$ -methyl styrene, p-methyl styrene, p-chlorine styrene, (meth) acrylic acid-(C<sub>1</sub>-C<sub>8</sub>)-alkyl esters and combinations thereof, and

B.1.2 a second vinyl monomer selected from the group consisting of vinyl cyanides, (meth)acrylic acid -(C<sub>1</sub>-C<sub>8</sub>)-alkyl esters, anhydrides of unsaturated carboxylic acids, imides of unsaturated carboxylic acids and combinations thereof; and

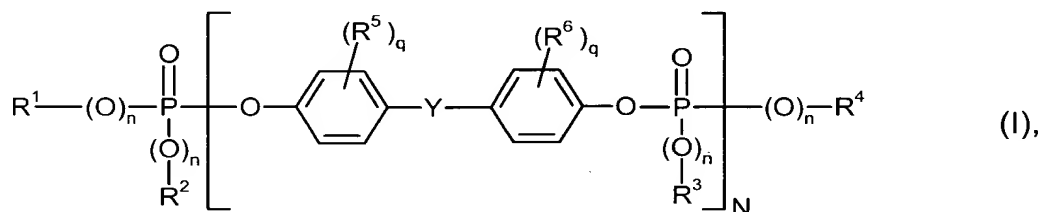
said graft base B.2 is selected from diene rubber, acrylate rubber, ethylene-propylene rubber, ethylene-propylene-diene rubber and mixtures thereof.

9. (Previously Presented) The composition of Claim 8 wherein said first vinyl monomer B.1.1 is styrene and said second vinyl monomer B.1.2 is acrylonitrile; and said graft base B.2 is polybutadiene, the polybutadiene optionally comprising up to 30 wt. %, based on the weight of said graft base B.2, of a comonomer selected from the group consisting of styrene, acrylonitrile, methylmethacrylate and mixtures thereof.

10. (Previously Presented) The composition of Claim 1, further comprising at least one additive selected from the group consisting of stabilisers, pigments, mould release agents, flow auxiliary substances, antistatics, fillers and reinforcing agents.

11. (Original) A moulded article prepared from the composition of Claim 1.

12. (Previously Presented) A method of improving the flame resistance of a composition comprising a thermoplastic polymer selected from the group consisting of polycarbonate, polyester carbonate and combinations thereof, said method comprising incorporating into said composition a phosphorus compound represented by general formula (I),



in which

$R^1$ ,  $R^2$ ,  $R^3$  and  $R^4$  are each independently selected from the group consisting of (i)  $C_1$  to  $C_8$  alkyl optionally substituted by halogen, (ii)  $C_5$  to  $C_6$  cycloalkyl, (iii)  $C_6$  to  $C_{10}$  aryl and (iv)  $C_7$  to  $C_{12}$  aralkyl, each of (ii), (iii) and (iv) being optionally and independently substituted by at least one of halogen and  $C_1$  to  $C_4$  alkyl;

$n$  is 0 or 1;



q is 0, 1, 2, 3 or 4;

N is 0.1 to 5

R<sup>5</sup> and R<sup>6</sup> independently of one another are each selected from the group consisting of C<sub>1</sub> to C<sub>4</sub> alkyl and halogen; and

Y denotes isopropylidene,

wherein the phosphorous compound represented by general formula (I) comprises less than 1 wt. % of isopropenylphenyl phosphate, based on the weight of the phosphorous compound represented by general formula (I).

13. (Original) The method of Claim 12, wherein the phosphorus compound represented by general formula (I) comprises less than 0.5 wt. % of isopropenylphenyl phosphate, based on the weight of said phosphorous compound represented by formula (I).

14. (Original) The method of Claim 12, wherein the phosphorus compound represented by general formula (I) comprises less than 0.2 wt. % of isopropenylphenyl phosphate based on the weight of said phosphorus compound represented by general formula (I).

15. (Original) The composition of Claim 7 wherein said graft base B.2 has a glass transition temperature of less than 0°C.

16. (Original) The composition of Claim 7 wherein said graft base B.2 has a glass transition temperature of less than -20°C.

17. (Previously Presented) The composition of Claim 8 wherein the vinyl cyanides, of which said second vinyl monomer B.1.2 may be selected, are selected from the group consisting of acrylonitrile, methacrylonitrile and combinations thereof; and the derivatives of unsaturated carboxylic acids, of said second vinyl monomer B.1.2 are selected from the group consisting of maleic acid anhydride, N-phenylmaleimide and combinations thereof.

**EVIDENCE APPENDIX**

Copy of Dr. Eckel's declaration.

Previously submitted to the Office in an amendment dated March, 8, 2004



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Thomas Eckel et al.  
Serial No. : 09/911,268  
Filed : July 23, 2001  
For : FLAME-RESISTANT POLYCARBONATE  
COMPOSITIONS  
Art Unit : 1714  
Examiner : Peter Szekely

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DECLARATION

I, Thomas Eckel, residing at Pfauenstr. 51, 41540 Dormagen, Germany, declare as follows:

- 1) that I have the following technical education and experience:
  - a) I am a chemist having studied at the Phillips-Universität of Marburg, Germany, from 1978 to 1987,
  - b) I received the degree of doctor rer. nat. at the Phillips-Universität of Marburg in the year of 1987,
  - c) I am employed by Bayer AG since July 1987 in the Research Department especially handling polymer blends;
- 2) that the following tests were carried out under my immediate supervision and control:

The IPP content of the oligomeric bisphenol A phosphates listed below was determined by HPLC measurements with the following configuration:

instrument:	Hewlett Packard HP 1100
type of column:	Li Chrosorp RP-8
column temperature:	40°C
gradient elution agent:	acetonitrile/water 50:50 to 100:0
concentration of phosphate in eluent:	5 mg/ml
run time:	38 min

The IPP content is then calculated (as area %) from the relative proportions at the defined retention time.

All investigated BDP samples (both as used in the present invention and comparative) are commercially available products with the chemical name Bisphenol A bis (diphenylphosphate) with the CAS No 5945-33-5 or 181028-79-5.

The comparative products are:

- 1) Fyrolflex BDP from Akzo, lot 0964-67, 01.03.1999
- 2) CR 741 from Daihachi, lot K91101, 01.11.1997
- 3) CR 741 from Daihachi, lot 10801, 28.08.1999

These comparative samples of Bisphenol A bis (diphenylphosphate) (see above) have been obtained prior to the invention of LeA 34675 (see dates of analysis).

The BDP sample used in the present invention is a representative Bisphenol A bis (diphenylphosphate), commercially available under the tradename NcendX P-30 from Albemarle.


All samples were analyzed under the same conditions and in the same manner using the method mentioned above.

The following IPP contents were found:

- |    |                     |           |
|----|---------------------|-----------|
| 1) | Akzo, Fyrolflex BDP | IPP=9,9%  |
| 2) | Daihachi, CR 741    | IPP=15,5% |
| 3) | Daihachi, CR 741    | IPP=2,5%  |

NcendX P-30	IPP=0,1%
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I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.



THOMAS ECKEL

Signed at Dormagen, this 2. day of March, 2004